Date: Mon, 5 Sep 94 04:30:12 PDT
From: Ham-Ant Mailing List and Newsgroup <ham-ant@ucsd.edu>
Errors-To: Ham-Ant-Errors@UCSD.Edu
Reply-To: Ham-Ant@UCSD.Edu
Precedence: Bulk
Subject: Ham-Ant Digest V94 #297
To: Ham-Ant

Ham-Ant Digest   Mon, 5 Sep 94   Volume 94 : Issue 297

Today's Topics:

                      300ohm twinlead, outdoors?
Are you from Nuernberg, Germany? I have a question to you. Thanks. <empty>
                  Calibrated Antenna Tuner=analyzer?
                         DISTRIBUTION STATUS
                      HF Mobile Noise Reduction
                        Indoor HF antenna help
                              NO SNOW!!!
                Secret's of the Collinear Vertical?
                           Velocity Factor

Send Replies or notes for publication to: <Ham-Ant@UCSD.Edu>
Send subscription requests to: <Ham-Ant-REQUEST@UCSD.Edu>
Problems you can't solve otherwise to brian@ucsd.edu.

Archives of past issues of the Ham-Ant Digest are available
(by FTP only) from UCSD.Edu in directory "mailarchives/ham-ant".

We trust that readers are intelligent enough to realize that all text
herein consists of personal comments and does not represent the official
policies or positions of any party. Your mileage may vary. So there.

Date: Fri, 2 Sep 1994 12:15:58 GMT
From: agate!iat.holonet.net!vectorbd!rkm@ames.arpa
Subject: 300ohm twinlead, outdoors?
To: ham-ant@ucsd.edu

Hi All:

   A quick question: I'm thinking of putting up a dipole, fed with
300ohm TV twin-lead, and routed through a transmatch to my QRP rig.
Since I live in an apartment, I'll have to bury the twin-lead to avoid
having the maintenance people run over it with the lawnmower, etc. :-)
Does anyone have any idea how long I can expect the feedline to last
before it degrades into unusability? If I have to replace it in the
middle of winter, I'd be somewhat displeased. :-) For that matter, is

anyone aware of the availability of heavy-duty twinlead?

Thanks,
   - Rich

N2VDS

Date: 5 Sep 1994 00:46:28 +0400
From: ihnp4.ucsd.edu!usc!howland.reston.ans.net!EU.net!news.eunet.fi!news.spb.su!
arcom.rcom.spb.su!not-for-mail@network.ucsd.edu
Subject: Are you from Nuernberg, Germany? I have a question to you. Thanks.
<empty>
To: ham-ant@ucsd.edu

Date: 3 Sep 1994 21:52:04 GMT
From: elroy.jpl.nasa.gov!swrinde!gatech!nntp.msstate.edu!ukma!asuvax!chnews!
sedona!cmoore@ames.arpa
Subject: Calibrated Antenna Tuner=analyzer?
To: ham-ant@ucsd.edu

The average 'T' antenna tuner has a series capacitor, an inductor to
ground, and another series capacitor. If these three components were
isolated from each other and calibrated, could the calibrated readings
and a little math turn the antenna tuner into an impedance measuring
instrument? If one knows the capacitances and inductances then one can
calculate the Xc's and Xl's. Using a 50 ohm 6db pad to isolate the
transmitter final from the antenna tuner, would the math work for simply
calculating the impedance seen at the transmission line?... So if
you have an antenna tuner, you also have an antenna analyzer?

My MFJ antenna tuner has too much electromagnetic field interaction
between the capacitors and the inductor to be very useful as a calibrated
analyzer but what if there were no interaction because of shielding?

73, Cecil, KG7BK, OOTC (Not speaking for Intel)

--
 Intel, Corp.
 5000 W. Chandler Blvd.
 Chandler, AZ 85226

Date: 5 Sep 94 00:13:00 GMT
From: news-mail-gateway@ucsd.edu
Subject: DISTRIBUTION STATUS
To: ham-ant@ucsd.edu

SMTPGATE.HAMANT   DISTRIBUTION STATUS INFORMATION   09/05/94 00:13
:00
==========

DISTRIBUTION ID: SMTPGATE.HAMANT.4793
SUBJECT   : Ham-Ant Digest V94 #291
DOCUMENT NAME : %%DOCNAME
DATE SENT   : 09/02/94   TIME SENT: 05:31:00
==========

YOUR MAIL WAS NOT DELIVERED FOR THE FOLLOWING REASON:

SNADS STATUS : 000F
X.400 CODE   : %%DIAGCODE
INFORMATION   : %%SUPPLINFO
EXPLANATION   : SNADS SYSTEM ERROR

==========

RECIPIENT   : CCMAIL.00A8929
LAST NAME   :
FIRST NAME   :
MIDDLE INITIAL :
INITIALS   :
NATIVE NAME   :
COUNTRY   :
ADMD   :
PRMD   :
ORGANIZATION   :
ORG UNIT 1   :
ORG UNIT 2   :
ORG UNIT 3   :
ORG UNIT 4   :
DDA   :
TITLE   :
DESCRIPTION   :
USERDATA   :
TELEPHONE   :

Date: Sat, 3 Sep 1994 03:16:11 GMT

From: ihnp4.ucsd.edu!dog.ee.lbl.gov!agate!spool.mu.edu!darwin.sura.net!
isdnlin.mtsu.edu!perot.mtsu.edu!raider!theporch!jackatak!root@network.ucsd.edu
Subject: HF Mobile Noise Reduction
To: ham-ant@ucsd.edu

ve3inb@ve3inb.ampr.ORG writes:
>   I'm looking for suggestions on how I could eliminate or minimize the
> engine ignition noise, so that I can operate HF mobile
There are many ways to reduce (or eliminate) engine noise from HF
rigs, and as I read your setup, several questions came to mind that
may influence your actions from this point forward:

> I'm convinced that the noise is coming in on the antenna.
Does the fact that the rig is quiet with antenna disconnected really
mean the antenna is the culprit? Probably a good focus, but you didn't
mention ANYTHING about how you have grounded your *SYSTEM*...

The rig and everything leading to it and away from it should be
properly grounded... even the body panels of the van need to be
electrically bonded together, and the van body bonded to the frame
with loads of grounding straps if you want a really quiet environment.

> Drake WH7 wattmeter
Why a wattmeter? SURELY, you are not in any danger of driving the rig
with too much power! ;^)

> which is connected to a MFJ-949C transmatch
Which, if memory serves, has a cross needle power/reflected meter
installed... you need TWO meters?

> that feeds a 40 meter Hamstick.
Are you operating mostly on 40 and using the tuner to increase your
delta F? Or, are you trying to go all band using a single stick? If
the former, we can continue... if the latter, recognize that you are
using a VERY inefficient REACTIVE load where the feedpoint impedance
on 20 and 10 meters *IF* the antenna were non reactive on 40, which it
is NOT, would be in the order of 1500 to 2400 ohms (3000-4800 ohms for
a dipole, thus 1/2 (approx) for a shortened vertical single element)
which is outside the realistic range of that tuner to match
satisfactorily... emperical evidence by QSO notwithstanding. For 49
and 75, you need bigger sticks and more antenna.... However, I don't
think that is the reason for the noise problem...

> The Hamstick is mounted on a homebrew magnetic mounting base.
THIS is where I think the problem lies... there is no ground return
path from your antenna save through the capacitive magnet mounts and
aluminum foil... Heck, the van is 7 years old, and surely can take a
hole or two....

Mount the antenna on a permanent mount and use a good quick-disconnect (like the brass beauties from Henry at GLA Systems.... 1-800-LUV BUG1 I am just a real satisfied customer with some REAL big antennas on the mobile... it's my only hamshack! ;^)

I have tried lots of different methods of feeding the antenna, of mounting and everything. I operate mostly on 75 and some on 160, though I am currently playing with a 40 meter WAS from the mobile. These bands are where noise is the major enemy and largest obstacle. My system is quiet and efficient, mostly because I focused on making it work well... it was all I had to operate with!

I use good feedline, and "N" connectors -- they are waetherproof *AND* easier to install properly... I didn't do it for the rumored improved "loss", though I am sure I get more RF through to where it counts because my connectors are done properly, whereas I could not make the same claim for a PL-259. DO NOT just split the coax and crimp the braid to a ring and solder the center to your antenna feed. it will leak water... actually SUCK the water up the coax, and all your RF will heat the water, not radiate...

And, ground the antenna mount back to the system with short broad straps... It is amazing how much difference a few grounding straps can make, and at 7 MHz, a little means a lot! ;^)

> The mounting base magnets (4 in all) are covered in aluminum
> foil. I was told that this would reduce the capacitive effect of the paint
> on the roof of my van.
Perhaps, though the aluminum foil creates yet another conductor/dialectric/ barrier of capactiance -- aluminum/oxide/magnet/glue/mount That makes for a helluva mess to deal with... The better way to eliminate that would be to bolt the frame of your antenna mount to the van body... no capacitance there at all! ;^)

> The van is a 1987 Chevrolet Astro.
Surely that van is old enough to not have it matter if you drill a hole! My monster is mounted on a BMW, and it draws stares everywhere it goes, but, the antenna works as well as many base stations, and that is because of lots of little details that individually may not matter, but all add up to a good installation... and I am ALWAYS looking for ways to improve it, and new ideas to try...

> When the engine was shut off, the setup worked very well. I'd like it
> to work as well with the engine running.
I find that powerline noise is my worst enemy, now. The vehicle does not degrade performance at all, in motion or stopped, engine running or not...

Hope this is helpful, George... be happy to go at it email, or drop in
on 3.768 some evening around 0000Z and maybe we can chat a while...
that's when I usually driving home from work.
73,
Jack, W4PPT/Mobile (75M SSB 2-letter WAS #1657 -- all from the mobile! ;^)

+--*--+
Jack GF Hill	Voice: (615) 459-2636 - Ham Call: W4PPT
P. O. Box 1685	Modem: (615) 377-5980 - Bicycling and SCUBA Diving
Brentwood, TN 37024	Fax: (615) 459-0038 - Life Member - ARRL
root@jackatak.raider.net -   "Plus ca change, plus c'est la meme chose"
+--*--+

Date: Sat, 3 Sep 1994 18:06:51 GMT
From: ihnp4.ucsd.edu!agate!library.ucla.edu!csulb.edu!csus.edu!netcom.com!
pineapp@network.ucsd.edu
Subject: Indoor HF antenna help
To: ham-ant@ucsd.edu

I am looking for a some pointers on installing an indoor 20-40 meters
ssb/cw antenna. I live on the top floor and do have a balcony. Please
reply via e-mail on recommendations of articles , books or any other
source.

73's
--

.---+--------------------------.
INTERNET: pineapp@netcom.com (DC436)	Daniel Curry WB6STW
AMPRNET : dan@wb6stw.ampr.org [44.4.20.144]	E-:-) Ham Radio Operator
AX.25 : wb6stw@n0ary.#NOCAL.CA.USA.NA	Redwood City, CA USA
	DoD # 1450
'---+--------------------------'

Date: 4 Sep 1994 18:14:28 -0400
From: ihnp4.ucsd.edu!agate!msuinfo!netnews.upenn.edu!netnews.CC.Lehigh.EDU!
ns3.CC.Lehigh.EDU!ns1.CC.Lehigh.EDU!not-for-mail@network.ucsd.edu
Subject: NO SNOW!!!
To: ham-ant@ucsd.edu

In article <hawley.778528227@aries>, hawley@aries.scs.uiuc.edu (Chuck Hawley) wr
ites:
>c002@ns3.CC.Lehigh.EDU (David M. Roseman) writes:
>

>>i've heard this winter is gonna be worse then last years...so what about
>>antennas!??! how do u get snow off or it, so it doesn't bend or rip outta the
>>wall??
>>cause i have anice 5 ele. 2M beamer with a 100ft coax from the house to the
>>chezzy pole its on :) but i don't want to coax to rip out of the connector or
>>the wall it's atached to...so how do u keep the heavy snow off?
>>transmit with 1Kw?
>
>>thanks..
>>DAvid
>
>Teflon spray?
>

yeah..never thought-o-that!

thanks!

er...i THINK i've heard of it :)

DAvid
:)**(:
**   David Roseman   ** The Flying HAm   **
**   SysOp of NODE 3 BBS   ** c002@lehigh.edu   **
**   Running OBV/2 Software   ** KBR-9318 - CB   **
**   HAmmy in IRC   ** N3SQE/SVARC - Ham   **
****

Date: Sat, 3 Sep 1994 14:02:23 GMT
From: rome.raynet.com!psinntp!psinntp!arrl.org!zlau@uunet.uu.net
Subject: Secret's of the Collinear Vertical?
To: ham-ant@ucsd.edu

Gene Wolford KB7WIP (genew@teleport.com) wrote:

: Why was it dropped from the Antenna Handbook?
: Why isn't something updated in it's place?

I don't know the details about this particular project, but
I can give you some background information why projects get
dropped.

1. The project has or developes problems. Ideally, someone
would accompany their complaint with an improved version that
fixes the problems, but this is rather unusual. One guess is
that people want to use whatever coax they have on hand to

build it--this does make the writeup a bit more difficult.

2. There are magic page lengths in the publishing industry.
We generally try to keep costs down, and one way of doing this
is tailoring the books to specific numbers of pages. Thus,
stuff gets cut to keep costs down. We have been known to
rationalize that because a project has appeared in 1 million
books, anyone who really needs it can find it somewhere.

3. Developing new/updated projects is *never* a high priority
at headquarters. Answering phone calls and letters/email from
our members is always more important.

--
Zack Lau KH6CP/1   2 way QRP WAS
                           8 States on 10 GHz
Internet: zlau@arrl.org   10 grids on 2304 MHz

Date: 3 Sep 1994 18:42:58 GMT
From: ihnp4.ucsd.edu!agate!spool.mu.edu!sdd.hp.com!col.hp.com!fc.hp.com!
myers@network.ucsd.edu
Subject: Velocity Factor
To: ham-ant@ucsd.edu

Steve Hutzley (hutzley@ranger.enet.dec.com) wrote:

>   Is there list available for the velocity factors of different,
and common
>   household/hardware store items

No, but velocity factor is related primarily to the relative permittivity
(dielectric constant) of the dielectric, or insulating material, used
between the two conductors of any transmission line. For the vast majority
of cases,

     Velocity factor = 1/SQRT(e)
                                 r

...and the dielectric constant of most common insulators IS readily
available in any number of reference sources.

Bob Myers KC0EW Hewlett-Packard Co. |Opinions expressed here are not
                  Workstations Systems Div.|those of my employer or any other
myers@fc.hp.com   Fort Collins, Colorado |sentient life-form on this planet.

Date: Sun, 4 Sep 1994 04:13:48 GMT
From: ihnp4.ucsd.edu!dog.ee.lbl.gov!agate!library.ucla.edu!csulb.edu!csus.edu!
netcom.com!dgf@network.ucsd.edu
To: ham-ant@ucsd.edu

References <341tpo$745@eis.wfunet.wfu.edu>, <6e.1863.719.0N666961@cencore.com>,
<347shr$o9@ornews.intel.com>.com
Subject : Re: Matching 50 ohms to 25

I am the original poster of this query. I greatly appreciate all of the
info, however, I have arrived at a solution for my problem (based on
many of the postings and e-mails), so thanks very much!

Date: 2 Sep 94 14:19:50 GMT
From: news.cerf.net!gopher.sdsc.edu!news.tc.cornell.edu!news.cac.psu.edu!
howland.reston.ans.net!cs.utexas.edu!utnut!torn!uunet.ca!uunet.ca!geac!herboid!
cattnts!ncrcan!coutts!@ihnp4.ucsd.edu
To: ham-ant@ucsd.edu

References <Cv3rCE.A65@ncrcae.ColumbiaSC.NCR.COM>, <325@coutts.UUCP>,
<3421nc$j6u@hopper.acm.org>ws
Subject : Re: Lightning (& Lightning Balls!)

In article <3421nc$j6u@hopper.acm.org> smithson@ACM.ORG writes:
:>When I last moved, I put 110VAC relays in a power distribution box for
:>this purpose. The relay switches via heavy duty contacts, 3 lines -
:>2 - 110VAC + 1 Neutral. This of course switches the 220VAC for my
:>linear (that I don't have yet) in the process. The relay was one of
:>two lucky finds at a ham-fest.

:>The relay is wired such that it latches itself on. You push one button
:>to activate the shack, and the relay holds itself on, as long as the
:>one live wire is alive (relay is tied to one side only). Push another,
:>and the relay drops out, and everything in the shack goes out. This
:>sooths the XYL, in case something starts smoking! Also conveniant when
:>I go away for a while.

:The only thing that worries me about this is that if a strike is strong
:enough, and it travelled as far as it did to get into your house, the
:gap in the relay isn't going to make much difference. It's inconvenient,
:but I unplug _everything_, especially after watching a lightning bolt hit
:my neighbor's steel pole-mounted basketball net, blow that out of the
:ground, travel to his house through the driveway rerod, knock all of the

:dirt out of the garage door hinges, then pass through his house wiring
:wasting all his electronics on the way to ground via the well pump, frying
:that too!

Well, of course it doesn't protect you from that. But then, how do you unplug all your gear when you are away for the day, and a storm brews up? If I asked my XYL to do it for me while I was at work, every time a storm brewed up, ... well, lets just say its better that I do it.

Unplugging everytime I leave the house-- that's too much work. That won't work if I wanna leave my packet station on for the day. Or if I want my PC on so I can dial into it from work, or someone else's house.

If you really wanna unplug everything conveniantly, the only other sane way to do it IMO is to use a BIG power breaker switch where the knife switches give you the kind of gaps that you think you can live with. Even if they don't, you might be able to get rods welded to the BOX such that the gap to the grounded ROD is shorter than the gap to the open knife. But of course, this requires decent ground cabling to handle the 200,000 Amps that you're anticipating 8_)

But hey, hee hee, even unplugging your equipment does not protect you from LIGHTNING BALLS!

Warren W. Gay VE3WWG John Coutts Library Services Limited

wwg@coutts.UUCP Niagara Falls, Ontario, Canada
(or wwg%coutts@uunet.ca, wwg%coutts@uunet.uu.net)

End of Ham-Ant Digest V94 #297
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